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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/636,115	08/07/2003	Ronald W. Call	2000.149	1583
29494	7590	08/03/2006		EXAMINER
HAMMER & HANF, PC 3125 SPRINGBANK LANE SUITE G CHARLOTTE, NC 28226			WEINER, LAURA S	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/636,115	CALL, RONALD W.
	Examiner	Art Unit
	Laura S. Weiner	1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 23 June 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 6-31 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-17-03
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1-5 in the reply filed on 6-23-06 is acknowledged.
2. Claims 6-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6-23-06.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurauchi et al. (5,691,047).

Kurauchi et al. teaches in column 6, lines 61-65, that the porous multi-layer film has a three layered structure having polypropylene layer-polyethylene layer-polypropylene layer. Kurauchi et al. teaches in column 7, lines 19-25, that the peel strength is not less than 3 g/15 mm, generally in the range of 3 to 60 g/15 mm

**[0.2-4 g/mm][claim peel strength 1.6 g/mm]** and a thickness of 20-60 um **[claim less than 25 um or less than or equal to 20 um]**. Kurauchi et al. teaches in column 6, lines 42-65, that the polypropylene film(s) and polyethylene film can be preferably united by pressing laminated films with heating. The polypropylene film and polyethylene film preferably has a thickness in the range of 5-20 um and an appropriate thickness can be chosen from the viewpoints of the desired thickness of the porous multi-layer film obtained by the stretching procedure and the desired use of the porous film.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurauchi et al. (5,691,047).

Kurauchi et al. teaches in column 6, lines 61-65, that the porous multi-layer film has a three layered structure having polypropylene layer-polyethylene layer-polypropylene layer. Kurauchi et al. teaches in column 7, lines 19-25, that the peel strength is generally in the range of 3 to 60 g/15 mm **[0.2-4 g/mm]** and a thickness of 20-60 um. Kurauchi et al. teaches in column 6, lines 42-65, that the polypropylene film and polyethylene film preferably has a thickness in the range of 5-20 um and an appropriate thickness can be chosen from the viewpoints of the desired thickness of the

porous multi-layer film obtained by the stretching procedure and the desired use of the porous film. The polypropylene film(s) and polyethylene film can be preferably united by pressing laminated films with heating.

Kurauchi et al. teaches the claimed invention as explained above except does not teach specifically that the thickness of the multi-layered film has a thickness of less than or equal to 15 um but does specify that each film can have a thickness as low as 5 um and that an appropriate thickness can be chosen from the viewpoints of the desired thickness of the porous multi-layer film obtained by the stretching procedure and the desired use of the porous film. Therefore, it would be within the skill of the ordinary person depending on the efficiency and cost requirements to adjust each of the polypropylene and polyethylene layers to each have a thickness of 5 um therefore creating a tri-layered film having a thickness of 15um.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use polypropylene and polyethylene layers each having a thickness of 5 um therefore creating a tri-layered film having a thickness of 15um, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

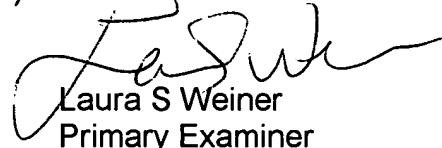
Call et al. (US 2002/0136945) teaches a microporous battery separator which is provided having a first co-extruded multilayered portion and a second co-extruded multilayered portion. The two portions are bonded together. Call et al. teaches on page 4, [0044], that Figure 3 shows a trilayer structure with two polypropylene layers sandwiching a polyethylene layer. Call et al. teaches on page 5, [0058-0059] and Table 1, that E3 (start with a two layer PP/PE and yield a four layer product PP/PE/PE/PP) having an adhesion of 32-40 g/in.

Lee et al. (6,833,219) teaches in column 11, lines 19-25, that a PP/PE/PP trilayer separator was used having a thickness of 18 um.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Laura S Weiner  
Primary Examiner  
Art Unit 1745

July 31, 2006